

CHAIN OF CUSTODY RECORD

Chicago, Illinois

PROJ. NO. RF-8302-5		PROJECT NAME SAUGET LANDFILL				NO. OF CON- TAINERS	157710										REMARKS
SAMPLERS: (Signature) <i>Samuel F. Small</i>							DIPTINS (802-592)										
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION												
SAS661E01 B-1A	7-13-83	0800		X	BORING B-1A	1	1										
SAS661E02 B-1A	7-13-83	0815		X	BORING B-1B	1	1										
SAS661E03 B-2A	7-13-83	1015		X	BORING B-2A	1	1										
SAS661E04 B-2B	7-13-83	1030		X	BORING B-2B	1	1										
SAS661E05 B-3A	7-13-83	1830		X	BORING B-3A	1	1										
SAS661E06 B-3B	7-13-83	1845		X	BORING B-3B	1	1										
SAS661E07 B-4A	7-13-83	2000		X	BORING B-4A	1	1										
SAS661E08 B-4B	7-13-83	2015		X	BORING B-4B	1	1										
SAS661E09 B-5A	7-14-83	0800		X	BORING B-5A	1	1										
SAS661E10 B-5B	7-14-83	0830		X	BORING B-5B	1	1										
SAS661E11 B-6A	7-14-83	0945		X	BORING B-6A	1	1										
SAS661E12 B-6B	7-14-83	1000		X	BORING B-6B	1	1										
SAS661E13 D-1	7-14-83	1200		X	BLANK 1	1	1										
SAS661E14 X	7-14-83	1200		X	TO BE SPIKED AT 1406	1	1										

Relinquished by: (Signature) <i>Samuel F. Small</i>	Date / Time 7-14-83 1400	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FEDERAL EXPRESS TO SCIENTIFIC APPLICATIONS INC AIRBILL 388418922 CUSTODY SEALS - 12971 17972	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-3661

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

MEDIUM CONCENTRATION SOIL SAMPLES
CHAIN OF CUSTODY RECORD

REGION 5
230 South Dearborn Str
Chicago, Illinois 60604

PROJ. NO. R5-8302.5		PROJECT NAME SAUGET LANDFILL				NO. OF CON- TAINERS	<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">DIXIE (80259R)</div>										REMARKS
SAMPLERS: (Signature) Samuel F. Small																	
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION												
661E 15 B-7A	7-14-83	1850		X	BORING B-7A	1	1									622943	
661E 16 B-7B	7-14-83	1910		X	BORING B-7B	1	1									"	
661E 17 B-8A	7-14-83	2010		X	BORING B-8A	1	1									"	
661E 18 B-8B	7-14-83	2025		X	BORING B-8B	1	1									"	
661E 19 B-9A	7-15-83	0820		X	BORING B-9A	1	1									"	
661E 20 B-9B	7-15-83	0840		X	BORING B-9B	1	1									"	
661E 21 B-10A	7-15-83	1015		X	BORING B-10A	1	1									"	
661E 22 B-10B	7-15-83	1030		X	BORING B-10B	1	1									"	
661E 23 B-11A	7-15-83	1830		X	BORING B-11A	1	1									"	
661E 24 B-11B	7-15-83	1845		X	BORING B-11B	1	1									"	
661E 25 B-12A	7-15-83	1945		X	BORING B-12A	1	1									"	
661E 26 B-12B	7-15-83	2000		X	BORING B-12B	1	1									"	
661E 27 B-13A	7-15-83	0800		X	BORING B-13A	1	1									"	
661E 28 B-13B	7-15-83	0820		X	BORING B-13B	1	1									"	
661E 29 B-14A	7-15-83	0920		X	BORING B-14A	1	1									"	
661E 30 B-14B	7-15-83	0940		X	BORING B-14B	1	1									"	
Relinquished by: (Signature) Samuel F. Small			Date / Time 7-19-83 1800		Received by: (Signature)			Relinquished by: (Signature)			Date / Time		Received by: (Signature)				
Relinquished by: (Signature)			Date / Time		Received by: (Signature)			Relinquished by: (Signature)			Date / Time		Received by: (Signature)				
Relinquished by: (Signature)			Date / Time		Received for Laboratory by: (Signature)			Date / Time			Remarks SHIPPED FEDERAL EXPRESS TO SCIENTIFIC APPLICATIONS INC AIRBILL 288418970 CUSTODY SEALS - 17979, 17980						

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

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recycled paper

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ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

Date Received for Review: 10/13/83 Date Review Completed: 10/17/83

To: RON ST. JOHN

From: Cynthia Bachunas

Subject: SAUGET LANDFILL (SAMPLES COLLECTED 7/13/83 AND 7/14/83)
ROS- 8302-05

Sample Description: CASE # 1887, SAS # 661E - MEDIUM
SOILS FOR DIOXIN

Project Data Status: STILL AWAITING ORGANICS

FIT Data Review Findings:

NO ADDITIONAL COMMENTS - SEE ATTACHED CRL REVIEW

Additional Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

10/4/83

RECEIVED OCT 13 1983

SUBJECT: Review of Region V - CLP Dioxin Data
Received for Review on 10/3/83

FROM: Curtis Ross, Director
Central Regional Laboratory

Chuck & Mylon

TO: Data User: FIT

The data for the following case has been reviewed and the quality judged against contractual specifications:

Site Name: Sageat Landfill SMO Case # SAS661E (Case # 1887)

Data Set #: SF3176 # samples 14

Sample type Soil

DU: Y905 Activity # C47303

CRL#s 83MS07554 to 83MS07566

SMO Traffic #s 661E01 to 661E14

Contract Lab Scientific Applications Inc. Review Hrs. 1.0

Data Quality Summary Comments:

Reviewer:

M. Kuehl

83MS07561 3.3 ppb TDD verified. (~~precision~~
accuracy $\pm 18\%$)

- ☒ Data are acceptable for use.
- ☐ Data are acceptable for use with qualification noted above.
- ☐ Data are preliminary, reruns or additional information have been requested.
- ☐ Data are unacceptable.

RECEIVED OCT 13 1983

REVIEW CHECKLIST

CASE # 661E REVIEWER m. Kuehl

CONTRACTOR Science Applications DATE 10/4/83

QC RESULTS

83MS07554 - S66

YES NO

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Blank < 1.0 ppb?

Detection limits < 1.0 ppb? Exceptions: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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37Cl TCDD Surrogate Recovery 50-150% Exceptions: _____
60-140%

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Ratio $\frac{332}{334}$ all samples = 0.67 - 0.87? Exceptions: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Matrix spike of 1ppb native 2,3,7,8 - TCDD recovery 50-150%?
Actual Recovery 96%

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Duplicate RPD $\leq 40\%$? Sample/dup results: <0.21, 0.07

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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C13 2,3,7,8 TCDD response for all samples at masses 332, 334
greater than 5:1 signal to noise? Exceptions: _____

<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Any samples reported ≥ 25 ppb? If so, was calibration extended
or 1.0g soil taken?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
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RRF native $\leq 10\%$ RSD? ,

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SAMPLE SUMMARY:

<u>Positive Samples #</u>	<u>Conc (ng/g)</u>	<u>Calculations Verified?</u>	<u>Criteria Met?</u>	<u>Exceptions</u>
661E-08 (83MS07S61)	3.31	OK	✓	

CONFIRMED SAMPLE # 661E-08 OKmiz 194/196 low
(1.33)

160986 (25.8 ng)
 107365 (10.2 g) (1.1)

Rng 2.5

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SF 3176



WHV-L84:146

September 29, 1983

USEPA - Region V
536 South Clark Street
Tenth Floor CRL
Chicago, Illinois 60605

ATTN: Mr. Curtis Ross

Dear Mr. Ross:

Enclosed you will find a copy of the data report for each of three sets of samples received by SAI for TCDD analysis in conjunction with SMO/SAS Case 661E. The sample matrix at this site proved to be particularly heavily laden with interfering organics, making generation of high quality data difficult. However, with the exception of six samples (all from set 2 of Case 661E) we were able to obtain analytical data which meets or exceeds the rigorous QA/QC requirements of the TCDD SAS program. Additionally, six samples required reextraction/reanalysis, and the majority required use of the most extensive cleanup techniques available.

Please don't hesitate to call me at (619) 456-6468 if you have any questions or comments concerning these data reports.

Regards,

WILLIAM H. VICK, Ph.D.
Senior Scientist

WHV:dm

Enclosure

Received
10/3/83
by
C. Ross

RECEIVED OCT 13 1983

SF 3176

2,3,7,8-TCDD DATA REPORT

SMO/SAS CASE 661E

Submitted by:

Science Applications, Inc.

9/29/83

SF3176

TCDD DATA REPORT

Document Control No.: 661E1-5-002
SMD/SAS Case No.: 661E
OC Column: 60 m SP2340 FSCC (0.24 mm ID)

Date: 9/29/83

Lab: Science Applications, Inc.

SMD Sample Number	Extraction Method	Cleanup Option	Analytical		Net Weight (grams)	2,3,7,8-TCDD (PPB)	D.L. (PPB)	320/322	332/334	Surrogate Recovery (Percent)	Ion Area				Comments
			Date	Time							257	320	322	328*	
661E-01 (A)	J	A,D	9/23/83	243	10.6	ND	0.03	----	0.75	108	390	100	180	188350	179536
661E-02 (A)	J	A	9/1/83	1358	10.6	ND	0.05	----	0.77	98	250	170	170	192650	201768
661E-03 (A)	J	A,D	9/23/83	315	10.8	ND	0.05	----	0.73	109	240	130	100	117994	111985
661E-04 (A)	J	A,D	9/23/83	349	10.9	ND	0.07	----	0.73	107	160	135	120	75344	72998
661E-05 (A)	J	A	9/1/83	1815	10.9	ND	0.51	----	0.70	97	325	175	270	29347	32297
661E-06 (A)	J	A	8/31/83	1305	10.7	ND	0.27	----	0.80	96	450	250	300	61286	64593
661E-07 (A)	J	A	9/23/83	421	10.2	ND	0.28	0.62	0.77	98	979	2572	4174	29429	30578
661E-08 (A)	J	A,D	9/23/83	459	10.2	3.31	----	0.67	0.74	96	19207	64593	100	10757	61693
661E-09 (A)	J	A,D	9/23/83	1027	10.5	ND	0.36	----	0.76	96	130	105	180	67316	11386
661E-10 (R)	J	A,D	9/23/83	621	10.6	ND	0.17	----	0.75	113	260	220	140	27666	61195
661E-11 (R)	J	A,D	9/23/83	930	10.6	ND	0.14	----	0.77	96	200	120	115	95795	29257
661E-12 (A)	J	A,D	9/23/83	1326	10.7	ND	0.05	----	0.76	100	165	120	1441	62749	97802
661E-13 (A)	J	A,D	9/1/83	1106	10.7	ND	0.21	----	0.78	94	390	200	200	165826	68099
661E-14 (A)	J	A	9/2/83	1136	10.5	0.91	----	0.69	0.86	100	50184	53926	78442	157324	162152
661E-15 (A)	J	A	9/1/83	1508	10.7	ND	0.07	----	0.82	103	430	175	210	36150	152392
661E-16 (A)	J	A,D	9/1/83	905	10.4	ND	0.39	----	0.77	102	180	140	780	81992	36292
661E-17 (A)	J	A	8/31/83	1434	10.5	ND	----	----	0.96	----	----	----	----	93775	85856
661E-18 (A)	J	A	8/31/83	1339	10.5	ND	----	----	----	----	----	----	----	----	7578

D.L. = Detection limit; reported in PPB based on a 10.0 gram sample.

Ion area corrected for native TCDD contribution by subtracting 0.009 times the m/e 322 ion area.

(D) = Duplicate (Interlab)

(N) = Native TCDD Spike

(R) = Reextraction/Analysis

78 = Field Blank

MB = Method Blank

A,B,C,D = Cleanup Option for Combustion loss of Optima

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SF3176

Page 1 of 5

TCDD DATA REPORT

Document Control No.: 661E1-5-002

SMD/SAS Case No.: 661E

GC Column: 60 m SP2140 FSCC (0.25 mm ID)

Date: 9/29/83

Labb: Science Applications, Inc.

Sci. Science Applications, Inc.															GC Column: 60 m SP2140 FSC (0.25)					
SMD Sample Number	Extraction Method	Cleaning Option	Analytical		Net Weight (grams)	2,3,7,8- TCDD (PPB)	D.L. † (PPB)	320/322	332/334	Surrogate Recovery (Percent)	Ion Area					Comments				
			Date	Time							257	320	322	328*	332		334			
661E-10	J	A	9/1/83	1846	10.3	-----	-----		13.3	-----					1587900	74312	5580	3		
661E-11	J	A	8/31/83	1514	10.5	-----	-----		0.50	-----					67200	28800	58112	3,4		

†D.L. = Detection Limit; reported in PPB based on a 10.0 gram sample.
 Ion area corrected for native TCDD contribution by subtracting 0.009 times the m/e 322 ion area.

PS = Field Blank
 MB = Method Blank

(D) = Duplicate (Intralab)
 (N) = Native TCDD Spike
 (R) = Reextraction/Analysis

J = Jar Extraction
 MB = Not Detected

A, B, C, D = Cleanup Option by combination ion of this ion

COMMENTS

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- 1) Ion values for m/e 257, 320 and 322 given as peak heights, and DL calculation performed on peak height basis.
- 2) DL calculation on area basis using m/e 320, 322, 332 and 334. 320/322 ratio and 257 response inadequate for native TCDD confirmation.
- 3) Reextraction/analysis required because of unacceptable m/e 332/334 ratio.
- 4) Reextraction/analysis required because of unacceptable m/e 332 and 334 signal:noise ratio.



ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

Date Received for Review: 10/13/83 Date Review Completed: 10/17/83

To: RON ST. JOHN

From: Cynthia Bachunas

Subject: SAUGET LANDFILL
R05-8302-05 (SAMPLES COLLECTED 7/14/83 AND 7/20/83)

Sample Description: CASE # 1887, SAS# 661E - MEDIUM
SOILS FOR DIOXIN

Project Data Status: STILL AWAITING ORGANICS

FIT Data Review Findings:

NO ADDITIONAL COMMENTS - SEE ATTACHED CRL REVIEWS

Additional Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

10/4/83

RECEIVED OCT 13 1983

SUBJECT: Review of Region V - CLP Dioxin Data

Received for Review on 10/3/83

FROM: Curtis Ross, Director
Central Regional Laboratory

Chuck & lly for

TO: Data User: FIT

The data for the following case has been reviewed and the quality judged against contractual specifications:

Site Name: Saugat L. F. SMO Case # SAS661E (CASE# 1887)

Data Set #: SF3191 # samples: 25

Sample type Soil 16 MCD 12/28/83

DU: 7905 Activity # C47303

CRL#s 83MS07S86 to 83MS08S⁰²10

SMO Traffic #s 661E15 to 611E30

Contract Lab Scientific Applications Inc. Review Hrs. 0.5

Reviewer:

Data Quality Summary Comments:

M. Kuehl

Samples 83MS07S92, 83MS07S94, 83MS07S95, 83MS08S01, 83MS08S02 could not be cleaned up sufficiently to yield ^{any} TDD results, internal standard could not be recovered. No data is available for these samples.

All other samples < 1.0 ppb, 83MS07S89 showed positive response of 0.11 ppb 2,3,7,8-TDD.

() Data are acceptable for use.

☒ Data are acceptable for use with qualification noted above.

() Data are preliminary, reruns or additional information have been requested.

() Data are unacceptable.

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REVIEW CHECKLIST

CASE # 661E REVIEWER Kuehl

CONTRACTOR Science Applications DATE 10/4/83

QC RESULTS

Samples 83MS07586-599
83MS08501, 502

YES ☒ NO ☒

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

Blank < 1.0 ppb?

Detection limits < 1.0 pph? Exceptions: 661E-89, 661E-21

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

661E-23, 661E-24, 661E-29, 661E-30

37Cl TCDD Surrogate Recovery 50-150% Exceptions: 60-140%

Samples noted above

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Ratio $\frac{332}{334}$ all samples = 0.67 - 0.87? Exceptions: 661E-21, 661E-23,

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

Matrix spike of 1ppb native 2,3,7,8 - TCDD recovery 50-150%?
Actual Recovery 48%

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

Duplicate RPD $\leq 40\%$? Sample/dup results: ND/MS due to Interferences

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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C13 2,3,7,8 TCDD response for all samples at masses 332, 334 greater than 5:1 signal to noise? Exceptions: 661E-21,

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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661E-23, 661E-24, 661E-29, 661E-30
Any samples reported ≥ 25 ppb? If so, was calibration extended or 1.0g soil taken?

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------

RRF native $\leq 10\%$ RSD?

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SF 3190

2,3,7,8-TCDD DATA REPORT

SMO/SAS CASE 661E

Submitted by:

Science Applications, Inc.

9/29/83

RECEIVED OCT 13 1983

SF3191

TCDD DATA REPORT

Page 1 of 4

Date: 9/29/83

Document Control No.: 661E2-S-002

SMD/SAS Case No.: 661E

Luigi Science Applications, Inc.

GC Column: 60 m SP2340 FSCC (U.24 mm ID)

SMD Sample Number	Extraction Method	Cleanup Option	Analytical		Net Weight (grams)	2,3,7,8- TCDD (PPB)	D.L. † (PPB)	320/322	332/334	Surrogate Recovery (Percent)	Ion Area						Comments
			Date	Time							257	320	322	328*	332	334	
661E-1587A	J	A,D	9/23/83	1402	10.1	ND	0.05	----	0.77	101	160	110	120	64128	49723	64648	1
661E-1687B	J	A,D	9/23/83	1444	10.3	ND	0.09	----	0.72	106	235	95	75	32086	22700	31722	2
661E-1788A	J	A,D	9/23/83	1527	10.1	ND	0.29	0.34	0.75	101	3610	6665	19673	112512	85720	114282	2
661E-1888B	J	A,D	9/23/83	1718	10.3	0.11	----	0.73	0.77	100	926	4407	6004	111288	87450	113258	2
661E-1989A	J	A,D	9/23/83	1757	10.3	ND	0.27	0.92	0.75	99	2230	13013	14181	122319	95740	127391	2
661E-2089B	J	A	9/2/83	1337	11.4	ND	0.07	----	0.82	118	500	435	32636	402646	278570	338636	1,3
661E-21(R)	J	A,D	9/23/83	1845	10.6	----	----	----	----	----	400	450	5824	238270	183090	239856	5
661E-2280B	J	A	9/2/83	1308	10.0	ND	0.15	----	0.76	102	----	----	----	----	----	----	1,3
661E-2381A	J	A,D	9/23/83	1933	10.3	----	----	----	----	----	----	----	----	----	107216	141792	5
661E-2481B	J	A,D	9/23/83	2009	10.6	----	----	----	0.76	----	635	240	20192	161996	99549	123374	1,3
661E-2582A	J	A	9/2/83	1500	10.3	ND	0.16	----	0.81	132	250	140	150	112308	86727	114772	1
661E-2682B	J	A,D	9/23/83	2228	10.3	ND	0.04	----	0.76	100	5130	9265	10566	176894	136037	182859	2
661E-2783A	J	A,D	9/23/83	2301	10.2	ND	0.14	0.88	0.74	100	1740	160	912	192528	149270	192176	1
661E-2883B	J	A,D	9/23/83	2334	10.2	ND	0.14	----	0.78	101	----	----	----	----	2573	3556	5
661E-2984A	J	A,D	9/24/83	007	10.9	----	----	----	0.76	----	----	----	----	94500	95704	----	5
661E-3084B	J	A,D	9/24/83	039	10.9	----	----	----	----	----	8912	19667	26916	124525	96663	124452	5
661E-30(D)	J	A,D	9/24/83	512	10.0	----	----	0.73	0.78	101	----	----	----	----	----	----	5
661E-42(N)	J	A,D	9/23/83	1154	10.2	0.47	----	----	----	----	----	----	----	----	----	----	5

† D.L. = Detection Limit; reported in PPB based on a 10.0 gram sample.
 Ion area corrected for native TCDD contribution by subtracting 0.009 times the m/s 322 ion area.

J = Jar Extraction
 ND = Not Detected

(D) = Duplicate (Intralab)
 (N) = Native TCDD Spike
 (R) = Reextraction/Analysis

FB = Field Blank
 MB = Method Blank

A,B,C,D = Cleanup that has 10' combined ion at that time

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PK 2 114

853191

TCCO DATA REPORT

Document Control No.: 661E2-5-002

SHO/SAS Case No.: 661E

CC Column: 60 m SP2340 FSCC (0.24 mm ID)

Date: 9/29/83

Lab: Science Applications, Inc.

SMI Sample Number	Extraction Method	Cleaning Option	Analytical		Wet Weight (grams)	2,3,7,8-TCDD (PPB)	D.L. † (PPB)	320/322	332/334	Surrogate Recovery (Percent)	Ion Area					Comments
			Date	Time							257	320	322	328*	332	334
MB 661E-21	J	A, D	9/2/83	1018	----	ND	0.22	----	0.77	113	260	140	290	72159	50086	65370
	J	A	9/2/83	1705	10.3	----	----	----	----	----				24324	----	----

† D.L. = Detection Limit; reported in PPB based on a 10.0 gram sample.

* Ion area corrected for native TCDD contribution by subtracting 0.009 times the m/z 322 ion area.

J = Jnr Extraction
ND = Not Detected

(D) = Duplicate (Internal)
(N) = Native TCDD Spike
(R) = Reextraction/Analysis

VB = Field Blank
MB = Method Blank

A, B, C, D = Cleanup that has 10% Contribution of that field

MSG-7-12

COMMENTS

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- 1) Ion values for m/e 257, 320 and 322 given as peak heights, and DL calculation performed on peak height basis.
- 2) DL calculation based on m/e 320 and 322 signal (area). Native TCDD presence not confirmed because of 320/322 ratio and/or signal: noise criteria not met.
- 3) DL calculation based on peak height of m/e 320 and 332 only.
- 4) Reextraction/analysis required because of unacceptable m/e 332 and 334 signal: noise ratio.
- 5) No value could be obtained because of unacceptable internal standard (m/e 332 and 334) signal: noise ratio. Poor recoveries indicate a significant matrix interference persists even after extensive extract cleanup.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

10/4/83

SUBJECT: Review of Region V - CLP Dioxin Data
Received for Review on 10/3/83

FROM: Curtis Ross, Director
Central Regional Laboratory

TO: Data User:

FDT

The data for the following case has been reviewed and the quality judged against contractual specifications:

Site Name: Sargent LF SMO Case # 661E

Data Set #: SF3191 # samples 9

Sample type Soil

DU: Y905 Activity # C47303

CRL#s 83ms08503-S10, R01

SMO Traffic #s 661E-31, 32, 33, 34, 35, 36, 37, 38, 39

Contract Lab Science Applications Review Hrs. 0.5

Data Quality Summary Comments: Reviewer: M. Kuehl

No 2,3,7,8-TCDD detected.

- ☒ Data are acceptable for use.
- ☐ Data are acceptable for use with qualification noted above.
- ☐ Data are preliminary, reruns or additional information have been requested.
- ☐ Data are unacceptable.

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REVIEW CHECKLIST

CASE # 661E REVIEWER M. Kuehl

CONTRACTOR Science Applications DATE 10/3/83

IQC RESULTS

Samples 83MS08S05-S10,
R01

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Blank < 1.0 ppb?

Detection limits < 1.0 ppb? Exceptions: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

³⁷Cl TCDD Surrogate Recovery 50-150% Exceptions: _____
60-140%

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Ratio ³³²/₃₃₄ all samples = 0.67 - 0.87? Exceptions: _____

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Matrix spike of 1ppb native 2,3,7,8 - TCDD recovery 50-150%?
Actual Recovery 39%

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

Duplicate RPD \leq 40%? Sample/dup results: ND/ND

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

¹³C 2,3,7,8 TCDD response for all samples at masses 332, 334
greater than 5:1 signal to noise? Exceptions: _____

<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	-------------------------------------

Any samples reported \geq 25 ppb? If so, was calibration extended
or 1.0g soil taken?

<input checked="" type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------

RRF native \leq 10% RSD?

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2

SAMPLE SUMMARY:

<u>Positive Samples #</u>	<u>Conc (ng/g)</u>	<u>Calculations Verified?</u>	<u>Criteria Met?</u>	<u>Exceptions</u>
<i>None</i>				

CONFIRMED SAMPLE # _____

SF3191

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2,3,7,8-TCDD DATA REPORT

SMO/SAS CASE 661E

Submitted by:

Science Applications, Inc.

9/29/83

SF3191

TCDD DATA REPORT

Pg 1 of 3

Date: 9/29/83

Lab: Science Applications, Inc.

Document Control No.: 661E3-5-002

SND/SAS Case No.: 661E

GC Column: 60 m SF2360 PLOT (0.24 in. ID)

SNI Sample Number	Extraction Method	Cleanup Option	Analytical		Net Weight (grams)	2,3,7,8- TCDD (ppb)	D.L. (ppb)	320/322	332/334	Surrogate Recovery (Percent)	Ion Area						Concentration
			Date	Time							257	320	322	328	332	334	
3M500503	661E-31/8/54	A	8/31/88	1648	10.4	ND	0.07	----	0.81	109	650	300	16710	280425	209396	258742	1.2
3M500504	661E-32/8/54	A.D	9/24/88	117	10.9	ND	0.09	----	0.77	100	5250	581	773	324848	254884	332259	1
3M500505	661E-33/8/54	A	8/31/88	1606	10.3	ND	0.24	----	0.82	98	2540	1100	6184	303448	253372	309556	1.2
3M500506	661E-34/8/54	A	9/1/83	1014	10.9	ND	0.06	----	0.80	94	1000	675	300	316056	271460	340561	1
3M500507	661E-35/8/54	A.D	9/24/88	319	10.5	0.37	----	0.81	0.75	97	9078	22573	27745	157141	124838	166159	1
3M500508	661E-36/8/54	A	8/31/88	1728	10.9	ND	0.10	----	0.67	88	350	300	220	107400	88652	131884	1
3M500509	661E-37/8/54	A.D	9/24/88	156	10.8	ND	0.88	----	0.87	82	155	140	105	6004	6092	7006	1
3M500510	661E-38/8/54	A.D	9/24/88	234	10.7	ND	0.13	----	0.75	107	290	150	155	41552	29962	39711	1
661E-39/8/54	661E-39/8/54	A	8/31/88	1802	10.8	ND	0.12	----	0.80	95	310	170	280	86790	74086	92146	1
661E-39(0)	661E-39(0)	A.D	9/24/88	434	10.7	ND	0.28	----	0.74	131	450	335	310	54136	31576	42524	1
MB	J	A.D	9/1/83	905	----	ND	0.39	----	0.77	102	180	140	780	36150	27971	36292	1
661E-38	J	A	9/1/83	939	10.7	----	----	----	1.22	----				12431	7110	1758	3

ID.L. = Detection Limit reported in PPS based on a 10.0 gram sample.
 Blank area corrected for native TCDD contribution by subtracting 0.009 times the m/e 322 ion area.

J = Jet Extraction
 MB = Not Detected

(U) = Duplicate (Intralab)
 (N) = Native TCDD Spike
 (R) = Reextraction/Analysis

PS = Field Blank
 MB = Method Blank

A,B,C,D = Cleanup from 10' Condensation at 10' level

RECEIVED OCT 13 1983

COMMENTS

RECEIVED OCT 13 1983

- 1) Ion values for m/e 257, 320 and 322 given as peak height, and DL calculation performed on peak height basis.
- 2) DL calculation based on m/e 320 and 332 only.
- 3) Reextraction/analysis required because of unacceptable m/e 332 and 334 signal : noise ratio and 332/334 ratio.

**SPECIAL ANALYTICAL SERVICES
REVIEW DOCUMENT**

C. SAS Number Region VIII Protocol 661E

		Protocol Code(s)
E. Analytical Methodologies:	Organics	<u>Region VII</u>
	Inorganics	<u></u>
	Other	<u></u>

H. Reviewer Function or Title CPL @ Coordinator

The purpose of this inquiry is to gain information and recommendations from the SAS Program Principals directly, in order to improve the methodology(ies), QA/QC requirements, or reporting formats for future similar Special Analytical Services. Therefore, please respond in a timely fashion to all questions and requests.

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SPECIAL ANALYTICAL SERVICES
CLIENT REVIEW INQUIRY

Please return this inquiry document to SMO after review of the data package for this Special Analytical Service.

A. General Methodologies

1. Did the referenced methodology(ies) or protocol provide technically useful information for this specific SAS request? If not, please explain.

not for 6 samples w/ intractable
matrices even after option D cleanup

2. Describe any changes in methodology or other technical improvements that you recommend in order to more adequately perform this specific SAS task.

perhaps a HEMS option for tough
sample matrices?

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B. QC Requirements

1. Were the QC procedures adequate for determining the quality of the data for this specific SAS request? If not, describe any problems encountered with the QC information.

yes

2. Describe any changes in the QC requirements that you recommend in order to more adequately perform this specific SAS task.

none

C. Data Sheets and Report Format

1. Were the reporting deliverables clear and understandable? If not, please explain.

yes

2. What changes in report or deliverable format do you recommend?

none - very good report, easy
to find information

D. Other Comments

Enter here any comments or recommendations for items not covered above.

April 8, 1983

Mr. Michael O'Toole
On Scene Coordinator
US EPA
Region V 5HRTUB
230 S. Dearborn
Chicago, Illinois 60604

Dear Michael:

Attached are the pictures which you requested back on January 14th regarding the uncovering of waste drums during installation of the railroad spur at our Sauget, Illinois facility.

The explanation of the pictures are as follows:

1. A view to the north showing the railroad spur which we were installing and which runs parallel with the Monsanto Hazardous landfill.
2. Also looking north along the railroad spur.
3. A view looking south overlooking the area where the drums were located and as a result our project stopped.
- 4&5. The same scene but taken at different times of the day. A drum is noted in the foreground, however, this is not the drum that caused us any problem.
6. Another view looking north in the vicinity of pictures #4 and #5 showing drum remnants.
7. A view looking west over the area containing drums. Note the two dark spots in the center of the picture which were some unidentified material which had seeped to the surface once we had removed our coke piles.
8. A close up of one of the spots depicted in picture #7.

Please let me know if you have any questions of a more specific nature regarding the photographs attached.

Sincerely,



Carl A. Smith
Director Product Safety and
Regulatory Affairs

Attachments
cc: J. Allen 3764
CAS:lg
0019p